

## ABSTRACT

### System and Method for an Auto-Tracking, Self-Calibrating Voltage Generator

A self-calibrating an auto-tracking voltage regulation method and system is provided that  
5 includes a superior voltage reference and a less stable operating voltage reference. The  
superior voltage reference may be a thermal resistor heated zener (TRZ) that is turned on  
only during a relatively low duty cycle sampling period. An error signal generator  
compares the superior voltage reference and a feedback voltage to generate an error  
signal based thereon. An error correction unit combines the error correction signal and  
10 the operating voltage reference to produce a calibrated output voltage that has a greater  
voltage stability than the operating voltage reference.